

Claims

1. A process for inducing and/or accelerating at least one phase transformation in molecular solids, characterized in that the molecular solid is subjected to a tribochemical treatment.
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2. The process as claimed in claim 1, characterized in that the phase transformation is achieved essentially by means of transmission of high mechanical energies.
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3. The process as claimed in claim 2, characterized in that the phase transformation is achieved essentially by means of transmission of high kinetic energies.
- 15 4. The process as claimed in one of claims 1 to 3, characterized in that the transformation is to a crystalline phase.
5. The process as claimed in one of claims 1 to 4, characterized in that the phase transformation is induced at the interfaces of the solid.
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6. The process as claimed in one of claims 1 to 5, characterized in that the transformation takes place between two polymorphs.
- 25 7. The process as claimed in one of claims 1 to 6, characterized in that the transformation takes place from an amorphous or glasslike phase to one or more crystalline phases.
8. The process as claimed in one of claims 1 to 7, characterized in that a solid not present in phase-pure form is converted to a phase-pure polymorph.
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9. The process as claimed in one of claims 1 to 8, characterized in that the solids comprise organic molecules or are of organic origin.
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10. The process as claimed in one of claims 1 to 9, characterized in that the solids are mixtures of inorganic and organic molecules.

11. The process as claimed in one of claims 1 to 10, characterized in that a semicontinuous process is effected.
- 5 12. The process as claimed in one of claims 1 to 11, characterized in that it is effected under a defined atmosphere.
13. The process as claimed in one of claims 1 to 12, characterized in that it is effected under a defined pressure.
- 10 14. The process as claimed in one of claims 1 to 13, characterized in that it is effected under temperature control.
- 15 15. The process as claimed in one of the preceding claims, characterized in that the solid possesses a greater density after the phase transformation.
16. The use of high-energy mills for performing phase transformations by a process of the preceding claims.

Abstract:

This invention relates to a method for phase transformation in molecular solids and the use of high-energy mills of said method.